## Sorbents for Gas Separations

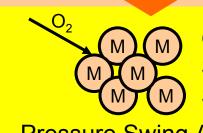


- Technology uses oxygen-selective sorbent materials and pressure swing adsorption
- Cost-effective separation of industrial gases such as oxygen and nitrogen
- Improved combustion efficiency

Alcoa
Bend Research
Pennsylvania State University
Praxair
Sigma-Aldrich, Inc.
University of New Mexico

## Air

- · Trace amounts of
  - Carbon dioxide
- Nitrogen ~ 78%
- Neon
- Oxygen ~ 21%
- Helium
- Argon ~ 1%
- Methane
- Other elements



Oxygen-Selective Sorbent

**Pressure Swing Adsorption** 

## **Potential Products**

- Nitrogen/oxygen co-products
- High purity nitrogen
- Argon
- High/low purity oxygen